

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-29 (canceled).

Claim 30 (currently amended): A method of manufacturing a Ta sputtering target, comprising the steps of:

forming a Ta ingot or billet by melting and casting a Ta raw material having a purity of 4N5 (99.995%) or greater;

forging the ingot or billet, and after said forging step, recrystallization annealing the ingot or billet a first time at a temperature of 1373K to 1673K;

after said forging and first recrystallization annealing steps, forging the ingot or billet and then recrystallization annealing the ingot or billet a second time at a temperature of 1373K to 1673K; and

after said forging and second recrystallization annealing steps, further forging or rolling the ingot or billet, and thereafter, conducting additional recrystallization annealing of the ingot or billet at a temperature between a recrystallization starting temperature and 1373K;

an average crystal grain diameter of the target being made to be a fine crystal grain size of 80 μm or less and the target being made to have no uneven macrostructure in the form of streaks or aggregates on a surface of the target and inside of the target.

Claim 31 (canceled).

Claim 32 (currently amended): A method according to claim ~~31~~ 30, wherein said additional recrystallization annealing conducted after said further forging or rolling step is conducted at a temperature of 1173K.

Claim 33 (previously presented): A method according to claim 30, wherein said additional recrystallization annealing conducted after said further forging or rolling step is conducted at a temperature of 1173K.

Claim 34 (new): A method of manufacturing a Ta sputtering target, comprising the steps of:

subjecting Ta raw material having a purity of 4N5 (99.995%) or greater to

electron beam melting and casting therefrom a Ta ingot or billet having
primary crystal grains of a diameter of roughly 50mm;

rolling or forging the Ta ingot or billet, and after said rolling or forging step,

recrystallization annealing the Ta ingot or billet a first time at a
temperature of 1373K to 1673K;

after said rolling or forging and first recrystallization annealing steps, cold forging

the Ta ingot or billet, and after said cold forging step, recrystallization

annealing the Ta ingot or billet for a second time at a temperature of

1373K to 1673K such that all heterophase and irregular crystal grains are
completely eliminated from the Ta ingot or billet;

after said cold forging and second recrystallization annealing steps, further cold forging the Ta ingot or billet, and thereafter, conducting recrystallization annealing of the Ta ingot or billet for a third time at a temperature between a recrystallization starting temperature and 1373K;

after said further cold forging and third recrystallization annealing steps, cold rolling the Ta ingot or billet, and thereafter, conducting recrystallization annealing of the Ta ingot or billet for a fourth time at a temperature between a recrystallization starting temperature and 1373K;

after said cold rolling and fourth recrystallization anneal step, forming a sputtering target from the Ta ingot or billet such that said target has an average crystal grain diameter of a fine crystal grain size of 80 μm or less and has no uneven macrostructure in the form of streaks, aggregates, and wrinkle shaped defects on a surface of the target and inside of the target due to the previous elimination of all heterophase and irregular crystal grains from the Ta ingot or billet.

Claim 35 (new): A method according to claim 34, wherein said rolling or forging step performed immediately before said first recrystallization annealing step is a cold extend forging step.

Claim 36 (new): A method according to claim 35, wherein said cold forging and further cold forging steps performed immediately before said second and third recrystallization annealing steps, respectively, are cold mix forging steps.

Claim 37 (new): A method according to claim 36, wherein said third and fourth recrystallization annealing steps are conducted at a temperature of 1173K.

Claim 38 (new): A method according to claim 37, wherein said fine crystal grain size of the sputtering target is 30 to 60 μm .